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ABSTRACT

This report documents the results of a special reading program offered to low income high school students involved in a youth incentive entitlement work/study project in Alachua County, Florida. The first section of the report discusses the need for literacy training through a reading enrichment program for entitlement students and the inadequacy of Florida's twelfth grade competency examination in assessing that need. The second section describes the recruitment strategy implemented to get students into the voluntary program, student grouping into basic skills and learning strategies classes, and the characteristics that distinguished the program from other remedial programs aimed at a similar population: (1) instruction that was teacher guided and not self-paced; (2) a small student-teacher ratio; (3) instruction primarily directed to the group as a whole; (4) an emphasis on silent reading over oral reading; and (5) the use of considerable drill and repetition. Significant gains in both word recognition and comprehension are reported in the third section, and the fourth section concludes that the benefits to participants and their employers strongly recommend the program's continuation. The last section provides an extensive review of the literature on compensatory reading programs. (AEA)

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Final Report
Enrichment Grant of the Youth Incentive
Entitlement Pilot Project

Comprehensive Employment Training Program

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I INTRODUCTION

The function of the Entitlement Project is to promote the vocational development of low income youth. Part-time employment is offered to clients contingent upon their attending school and maintaining a passing grade point average. The job serves several functions in addition to providing a monetary incentive for staying in school. For one, it acquaints students with the world of work. They learn to handle responsibilities--to show up on time, to complete assigned tasks--in a setting where their behavior has consequences that are immediate and practical. That is different from school, where for many low income youth the practical consequences of not doing well academically are too distant to be personally real, while the immediate consequences--the failure to learn and the low grade--do not seem that critical.

The job site is also a place where youth can interact with adults who are potential role models, and it can lead to their taking themselves and their future seriously. For example, the Entitlement student tearing and sorting printouts in a computer center comes in contact with programmers and technicians, and as a result of the experience may come to aspire to that line of work for himself or herself. It is not unrealistic to expect such an outcome from participation in the program. Career aspirations typically develop out of one's experience in a given field and through identification with persons in that field. Hopefully, the heightened career aspirations will further motivate school achievement and the pursuit of the kinds of post-

secondary training needed to qualify for those careers.

Entitlement is addressing a major social problem, and from our perspective on its implementation in Alachua County, it is doing so in a way that is conceptually sound. As a group, low income youth have a lower probability of acquiring the skills that will make them employable in a technological and service oriented economy. It is patently cost effective to attack what is at base an educational problem early, while the target population is still in school. Furthermore, the strategy of getting the students into the workplace as a means of expanding their horizons is especially appropriate for low income students who often lack a tangible sense of the range of career choices available.

However, it is one thing to generate aspirations, and quite another to have them realized. As important as motivation and incentives are to learning, wanting to achieve, no matter how badly, is not sufficient if one lacks the intellectual skills needed to achieve. Much is made of the fact that disadvantaged low achievers have poor self-concepts and believe that they are intellectually inferior and unable to learn. To be sure, many disadvantaged students are failing courses (or receiving social passes) because they are not putting forth the effort required to learn. But many are not reading their textbooks or paying attention in their classes because they lack the decoding skills, vocabulary, and conceptual frameworks required to comprehend their texts and the teachers' lectures. They would like to be able to read effortlessly and understand what is going on in their classes, but cannot because they have not mastered the prerequisite skills.

School systems are aware of these deficits and compensatory education programs and remedial basic skills instruction are becoming more common place in high schools. It is difficult to evaluate the impact of these programs, but

they do not seem to be adequate. Goldberg and Schiffman (1972) estimate that remedial instruction in reading, for junior and senior high school students, has a six to ten percent success rate after two years of remedial instruction. Goldberg and Schiffman would define success as having the student reading at a level commensurate with their estimated potential. Hopefully, the back-to-basics movement in American education will lead to a dramatic upturn in the literacy level of the population, but it is too early to tell whether the increased emphasis on reading will make a difference.

In any case, at this point in time, and for the population served by Entitlement, the inability to learn from printed materials poses a barrier to further vocational skill development. It was for that reason that an Enrichment Grant was sought for the purpose of providing remedial reading instruction to Entitlement students.

The Nature and Implications of the Problem

Immediately after being awarded the Enrichment Grant, the reading scores of Entitlement students on the Stanford Test of Academic Achievement (administered April, 1979) were obtained from their high schools. Until this year, the test was administered annually in Alachua County. Of the seventy scores that could be obtained, 95 percent of the students scored below the mean for their grade level in terms of national norms. What makes this data especially alarming is that, on the average, the students exhibited a deficit of five grade levels, and two-thirds of the sample were reading between third and mid-sixth grade level.

The implications of that data for vocational development are grim. Sticht (1975) estimates that training in most skilled vocations requires that trainees, minimally, have a mid-seventh grade reading level, with some jobs

requiring considerably higher levels. An independent analysis that we conducted confirms that. Introductory texts used in the Industrial Arts and Practical Nursing vocational sequences at the local community college are written at the tenth grade level of difficulty. Employers routinely assess literacy. Sears, which is a large employer in Alachua County, administers both a vocabulary and reading comprehension test which an applicant must pass in order to be hired and receive training in sales and even stock work. The Army, which formerly could provide places for the marginally literate, is now releasing recruits who are not reading at the fifth grade level. The Army reflects the society as a whole--it has become technologized, and one must be functionally literate to master the increasingly complex job skills within the system. The point we wish to make here is that the Enrichment reading program, which is an adjunct service provided in the context of Entitlement, is addressing a crucial component of vocational development. Reading is not an ancillary skill. Unless the literacy problem is attacked, the problem of chronic unemployment among the disadvantaged will remain.

What makes this all the more frustrating is that illiteracy feeds upon itself. Functionally illiterate high school students did not forget how to read, they never mastered the skill in the first place when it was taught in the lower grades. That can be attributed to their already being educationally disadvantaged when they entered school. Many come from homes where books and magazines are not fixtures. The parents are not as likely to have read to them because the parents themselves are not sufficiently skilled. Also, in speech, persons with minimal education employ what Bernstein (1960) has termed a restricted language code. This code contrasts with the more elaborate formal code used by middle and upper SES groups that are more highly educated.

The restricted code is much less precise--the vocabulary is limited, fewer modifiers are employed, and responses are more likely to be in the form of phrases rather than complete sentences. The child coming from that kind of language environment will be at a disadvantage when learning to read. To be functionally literate, one must not only be able to decode words, one must have the vocabulary and linguistic competence to grasp the meaning represented by the words. Simon and Hayes (1976) argue that:

Functional literacy is primarily an understanding problem That is to say, most functional illiterates in our society possess the basic decoding skills for reading the printed word. What they lack is adequate vocabulary, knowledge, and skill to interpret the communications that are directed to them regardless of whether those communications are written or spoken. (p. 270)

Vocabulary tends to keep pace with knowledge of the world. That is, persons learn the names of things that are perceptually discriminated and part of their experience. Reading provides access to domains that would not otherwise be part of one's experience. Thus, through reading, one's vocabulary and conceptual store continues to grow, and that sets the stage for reading more difficult materials which then further expand one's competence. That is why the intellectual gap separating the disabled from the skilled reader grows ever larger during the school years.

This analysis was confirmed by the testing we conducted with the Entitlement students who volunteered for the program. They were given the Peabody Picture Vocabulary Test, which is a measure of individuals' receptive vocabulary. It is norm referenced by age and has a standardized mean of 100 (SD = 15). The mean standardized score obtained by the Entitlement students we sampled (N = 44) was 76. That is, their average score was over a standard deviation and a half below the norms for their age. The Peabody

scores, not surprisingly, were predictive of reading comprehension ($r = .44$), and word identification ($r = .53$). It should be noted that these correlations underestimate the degree of relationship because of the restricted range in the performance of the sampled students.¹

The implications of what has been reported in this section can be summarized as follows:

1. Approximately two-thirds of Alachua County Entitlement students are in need of remedial reading instruction if they are to profit from training--or even gain admission to training programs--for semi-skilled and skilled professions.
2. Although many students exhibit decoding problems, the source of the reading difficulty is more profound than what can be remediated simply by training in phoneme identification. The poor reading skills reflect a severe deficit in vocabulary and conceptual development. (That is probably the reason why many short term remedial programs have not proved effective with this population.)
3. Given the above, literacy training ought to be made an integral component of skill development programs and treated as a priority item. It is crucial that teachers and counselors communicate the problem to clients and not simply raise career aspirations which cannot be realized if the reading deficits are not corrected. (Note: a characteristic of low achievers and those with low motivation to achieve is that their expressed vocational choices are more likely to be unrealistic - Mahone, 1960.)

The Florida 12th Grade Exam

The Florida Legislature mandated that all graduating seniors demonstrate that they are functionally literate by passing what is called the Florida

¹Reading comprehension was assessed using one of two cloze tests, either the GAP or GAPADOL. Word identification was measured with the appropriate section of the Wide Range Achievement Test. The mean comprehension score obtained prior to receiving instruction, expressed as a grade level, 5.6, the word identification grade level mean was 6.2. The distributions obtained were generally consistent with the Stanford scores we obtained from the schools. This indicates that the sample we tested are representative of the Entitlement population in Alachua County as a whole.

Twelfth Grade Exam, an assessment of basic skills. None of the students in our sample who took the exam failed the reading section of Florida's test. Lest this be interpreted as evidence that Entitlement students do not have reading problems, it should be pointed out that among those passing the Florida test were students who we, as well as the school system, tested as reading at the third grade level. That cannot be accounted for by differences in the motivation to do well in the different testing situations. Unfortunately, copies of the test are not available for content analysis. Our strong suspicion is that the Florida test is not a valid measure of whether the student can master the Reading tasks confronting persons in this culture in their daily lives. It is possible also that there has been some explicit teaching to the test on the part of the schools.

II PROGRAM CHARACTERISTICS

Recruitment

Participation in the reading program was voluntary. The directors of the program and the Entitlement counselors engaged in a vigorous and methodical recruitment effort. Bengston and Smith appeared at the group sessions to describe the program and sell the students on its importance. During the initial drive, 70 students signed a sheet indicating an interest in participating. In the early spring, and thereafter, new Entitlement students were brought to the Reading Clinic as part of their orientation. They were shown equipment and materials and had the opportunity to quiz instructors and program participants. Although many of the students seemed enthusiastic, the enthusiasm must have quickly worn off, because only 44 students came to the Clinic for the initial evaluation. Seven of those 44 never showed up to the classes to which they were assigned, and of the 37 who did attend class, only 16 received at least 13 hours of instruction.

A reminder and a map were mailed to students so that they would not forget their appointment or not show up because they could not find the Clinic. In addition, they were called at work or home the day before their appointment. Counselors also assisted in recruitment by emphasizing the importance of the program to those they counseled, and also by helping in rescheduling missed appointments. The results of all of these efforts were disappointing, but the numbers would no doubt have been even smaller had that not been done.

We wish we could have recruited more of the very poorest readers. The difficulty encountered in attracting participants suggests that they are not cognizant of the seriousness of the problem, or else that they have given up on themselves and on the possibility that they can learn. If they believe the latter, they are wrong and ought to be persuaded otherwise. How to do that short of actually having them learn will be difficult if participation is voluntary. These students have a long history of failure and they are not easily convinced that their situation might change.

Grouping

Based on the initial assessment of their reading skills, students in the Enrichment program were assigned to either a "basic skills class" or a "learning strategies class" that met for one and a half hours, twice weekly. The basic skills classes consisted of students who were reading at the fifth grade level or lower. Learning strategies classes consisted of students who were reading above the fifth grade level. The reason for dividing students at this level was because, according to Powell (1977), the mid-fifth grade level is where reading skills become "intact and independent of external support, although they still need expansion, specialization, and refinement (p. 490)." Below this "basic literacy level," reading skills that form the foundation upon which further learning is contingent still need to be developed. The learning strategies class had the basic reading skills intact and could profit most from work on expanding their vocabularies, and working on learning techniques to better extract information from the printed page. A more detailed description of the classes is given below.

The Basic Skills Class. The instructors teaching clients in the basic skills classes attempted to maximize the amount of time available for "engaged"

activities. A conscientious effort was made to allow adequate learning time for mastery of the various competencies before moving on to new activities. A typical hour and a half lesson was broken into four parts: decoding activities, vocabulary development, comprehension activities using a directed reading lesson, and uninterrupted sustained silent reading.

Materials such as Glass Analysis kits (1978) and complementary materials were used for decoding activities. Vocabulary words and comprehension activities came from materials such as the CROSSWINDS - Book One (1979), a basal reader with low readability and high interest, and HERE AND NOW - HI C (1975) - third grade readability but with an interest level for high school students. Books A₁ and A₂ of the TODAY (1977) series, which contain everyday reading tasks necessary for economic success, were also used with this group. Activities such as how to fill out applications, reading classified ads, using coupons, reading maps, reading bills, etc., were covered in the TODAY books.

For uninterrupted sustained silent reading, the clients were allowed to read books of their choice for pleasure. A variety of books were available from the University of Florida's Reading Center for this activity.

It is apparent that this group's activities are certainly not unlike a reading program that could be offered by the public schools. Since the basic skills class has such a low literacy level, it is impossible to work on job training materials until the foundation for generative reading have been established. The classtime was not spent working with each client on an individual basis. Instead, instruction was offered to groups of three or four students at a time. Since instructional time is such a crucial variable in increasing a low achiever's literacy level, using the time with groups of students rather than on an individual basis certainly is more efficient and effective than breaking the time up.

The Learning Strategies Class. The major focus in the learning strategies group were "survival" skills, vocabulary development, comprehension, and learning strategies as they pertained to reading on the job. The typical lesson for this class was twenty minutes spent on survival skills, forty-five minutes of learning strategies and twenty-five minutes of independent reading.

This class of students had previously acquired the basic foundations of reading, that is adequate decoding skills and sufficient vocabulary development and comprehension abilities to "read to learn." However, most students did not know how to read materials appropriately to maximize information acquisition. This class's activities were similar in parts to what could be offered in schools; however, more focus on work-type reading activities were done than could be expected from public schools. The reason for this is the demands of jobs vary from occupation to occupation and are not necessarily generalizable across occupations (Powell, 1977). Schools see their role as that of teaching the foundations of reading, not the teaching of the skills for information acquisition and utilization for specific occupations.

General Instructional Considerations

The Enrichment Reading Program has a number of characteristics which, taken together, distinguish it from other remedial programs aimed at a similar population.

First, and most important in our judgment, instruction was teacher guided and not self-paced. What this means is that the teacher posed questions about the material that was read and helped students, as necessary, to find the answers. When novel vocabulary was introduced, attention was directed to the new words and their meaning was either explained or else students were encouraged to infer the meaning from context. If a student's attention drifted

during a lesson, the teacher was quick to bring him or her back on task. The instructional pace was brisk, and a friendly but business-like attitude was conveyed to the students.

Second, the student-teacher ratio was small--the largest class had only six students. Consequently, teachers got to know the students quite well and they were able to relate personally to each other and to interact frequently. Students did not have to wait long to get a question answered, and the small numbers meant that they would be called on to respond frequently themselves.

Third, instruction was frequently ^{primarily} ~~not~~ always--directed to the group as a whole. This is efficient when the group is functioning at close to the same level because it saves the teacher from having to repeat the same thing over and over. Thus, students receive more teacher instruction than would otherwise be the case. Group instruction also allows for peer interaction and support.

Fourth, silent reading was emphasized over oral reading. Approximately 70 percent of the reading was silent. Silent reading leads to superior comprehension relative to oral reading. It is the way most reading is done outside classrooms and it also reduces some of the anxiety raised in poor readers when they must perform publicly.

Fifth, there was considerable drill and repetition. An overwhelming body of evidence supports the premise that repeated practice enhances skill acquisition. Able readers have reached a level of automaticity in the recognition of common words and phoneme clusters, and in the recognition of word meaning. Drilling and repeated practice promotes that level of competence. Presentations of words with tachistoscopic devices and guided readers were also used for that purpose.

The teacher guided approach we selected to use for remediation is "old fashioned," although it represents an innovation in the context of current pedagogic practice. It is much more in vogue now to use self-paced instructional systems such as the DITS. In those systems, the teacher functions primarily as a manager and clerk--the materials do the teaching and the pace is determined by the student. However, in reviewing the remedial reading and compensatory education literature, we could locate no published empirical evidence to indicate that that approach leads to greater gains. On the contrary, the instructional variable that emerges time and again in research on reading instruction for low SES students is the amount of instruction provided by the teacher, i.e., higher amounts of teacher instruction are associated with greater gains. The student variable that emerges as most critical is the amount of time spent actively engaged in the learning activities. These two variables are related. On task time is more likely to be maximized when the teacher is guiding the students through the lesson, personally encouraging and cajoling them to work diligently at the task at hand. Programmed materials are impersonal in our judgment, and the students often work at the materials lackadaisically. They see their task as one of filling in the blanks and answering the questions at the end of a reading passage. What happens is that they develop strategies for doing so that do not require them to read the content carefully and to master the concepts being taught. The learning task comes to be regarded as busy work and it does not absorb their interest.

The empirical rationale alluded to above is provided in REVIEW OF THE LITERATURE, Section V.

III RESULTS

Prior to receiving instruction, all students enrolled in the program were tested on their ability to identify words and on their ability to read for comprehension. The former was assessed using the word identification section of the Wide Range Achievement Test (1978). Comprehension was assessed for those whose word identification scores were below the fifth grade level with the GAP; the GAPADOL was used for those with word identification scores at the fifth grade level or above. The word identification and the comprehension measures were readministered in April, June and August. The pretest/posttest differences that are reported below are based on the differences between initial performance and the most recent assessment.

Both the word identification and comprehension measures are power tests and resistant to practice effects. Students did not receive feedback with respect to their performance on individual items on the tests. In addition, the tests were administered without advance notice to the instructors of the students. There was no effort made to teach to specific items on any of the tests.

Table 1 provides mean performance and mean gain by group and test in terms of grade level scores. The overall mean gain in word recognition of 1.7 grade levels ($SD = .90$) and the overall mean gain in comprehension of 1.4 grade levels ($SD = 1.8$) is remarkable given that students received, on the average, 28 hours of instruction. That is equivalent to a five and a half week course in the public schools that would meet an hour per day. This is not a gain

TABLE I
MEAN PRETEST AND POSTTEST PERFORMANCE
IN WORD RECOGNITION
AND COMPREHENSION

Instructional Group	Word Recognition			Comprehension		
	Pretest	Posttest	Gain	Pretest	Posttest	Gain
Basic Skills (n = 4)	4.8	6.6	+1.8	3.5	4.0	+ .5
Learning Strategies (n = 13)	7.1	8.8	+1.7	7.1	8.8	+1.7
Total	6.5	8.2	+1.7	6.2	7.6	+1.4

that could have been expected to occur without the intervention, since the students average gain per year in school had been approximately .5 level in both word recognition and comprehension.

In addition to the reading data, we were also interested in determining whether there was any carryover from the classroom to the work site. A control group composed of YIEPP students was identified who did not participate in the reading program. Control students were matched to experimental students on sex, grade level, and scores on the Stanford Test of Academic Achievement (plus or minus five percentile points). Up until the 1979-1980 school year, this was administered annually in the spring to Alachua County high school students. Matching was possible for 10 of the 16 experimental students' files at CETA (see attachment). An overall score was obtained by assigning numerical values of one to five for the categories "needs improvement" to "excellent" and then summing all 16 scores on the sheet. The mean work rating for the experimental group was 64.7, for the control group the mean rating was 55.9. The difference is marginally significant, $t = 1.40$, $p < .10 > .05$. This should not be interpreted as necessarily resulting from the reading program however. Experimental students volunteered for the reading program and thus may be generally more motivated to achieve.

A difference favoring the experimental group was also observed with respect to the number of students who were terminated from the program because of poor work or poor job performance. None of the reading program participants were terminated for either of those reasons, while three of the ten control students received negative terminations.

In addition to the evaluation check list, job supervisors and counselors also provide written comments about the work performance of clients. It is not possible to use that information for comparative purposes, nor can it be

**COMPREHENSIVE EMPLOYMENT TRAINING PROGRAM
PROGRESS REPORT - YOUTH PROGRAMS**

	<u>Excellent</u>	<u>Very Good</u>	<u>Good</u>	<u>Fair</u>	<u>Needs Improvement</u>
1. Attendance	_____	_____	_____	_____	_____
2. Punctuality	_____	_____	_____	_____	_____
3. Dependability	_____	_____	_____	_____	_____
4. Appearance	_____	_____	_____	_____	_____
5. Attitude	_____	_____	_____	_____	_____
6. Cooperation	_____	_____	_____	_____	_____
7. Getting along with co-workers	_____	_____	_____	_____	_____
8. Ability to follow directions	_____	_____	_____	_____	_____
9. Initiative	_____	_____	_____	_____	_____
10. Acceptance of responsibility	_____	_____	_____	_____	_____
11. Willingness to work	_____	_____	_____	_____	_____
12. Reception to constructive criticism	_____	_____	_____	_____	_____
13. Interest in work	_____	_____	_____	_____	_____
14. Quantity of work	_____	_____	_____	_____	_____
15. Improvement during training	_____	_____	_____	_____	_____

readily summarized. Since there may be some interest in these reports, we have extracted those comments from the most recent reports and list them for the participants who who were enrolled for 13 or more hours in the reading program, and where that information could be obtained from their files.

<u>Client</u>	<u>Comments of Job Supervisor or Counselor</u>
HB	Improvement in appearance.
GD	G has had a variety of tasks to complete from computer information to laboring tasks. He has developed excellent work behavior.
JD	Excellent student and aide. J has excellent work habits. Highly motivated to succeed. Seems to be leaning toward majoring in education. Will attend University of Florida this summer.
MG	M has continued to perform her duties well, taking much pride. She possesses a lot of potential for a productive career. It has been a joy to supervise her.
CJ	C is doing very well . . . may have a permanent job at Shands in addition to attending Santa Fe Community College.
JJ	J had not come in or called on August 4 . . . put her on contract. J did an excellent job this summer. Supervisor has requested that J remain at site.
PL	(Quit the program without notifying counselor.) I would not advise reconsideration for the program.
GM	G has learned to communicate better with her co-workers and has learned to be sensitive to them . . . shows interest in her work.
YP	No problems.
RR	R has shown phenomenal growth in her work since June.
GR	G needs only to continue his education to be a real success.
YS	Needs to improve her communication skills.
AS	A follows directions well and accepts criticism graciously.
JW ₁	Needs more improvement in skills.

JW₂

Limited working skills. He needs to exhibit more confidence in himself . . . has will power and good potential.

TW

Highly recommended for next year's program.

IV CONCLUSIONS

Benefits

All of the students who participated in the program and received at least 13 hours of instruction exhibited growth in their reading skills. As was stressed in the introductory sections, that is crucial for the vocational development needed to become employable in this society. One success story stands out. A senior who was doing very well in the program was brought by her instructor to the University recruiting officer and encouraged to apply for admission. She was accepted to the University of Florida and has been attending this past summer. Her career goal is to become an elementary school teacher. We think we played a key role in that course of events.

Besides the benefits to participants, other students who are educationally disadvantaged stand to benefit indirectly from what was learned about remediation in this project. Future and practicing teachers enrolled in our courses and workshops will be informed about the instructional strategies found to be effective. Also a description of the program and the results will be reported at professional meetings and in a journal article.

We hope to rigorously test and refine our ideas further and have an impact on educational policy decisions as they relate to literacy training for low income students. We are very concerned that the kinds of programs that are funded be research based and pedagogically sound. Clearly, despite a history of failure, these students can learn and they must not be written off as poor educational risks. Of course, much more is needed in the way of instruction

than we were able to provide. However, an optimistic prognosis is in order. If intensive instruction of the kind given in this Enrichment project were delivered over a much longer time period, the reading achievement gains would likely be quite dramatic.

Recommendations

Instructional Methods. It is strongly recommended that consideration be given to teacher-guided programs as an alternative to individualized, self-paced remedial reading instruction. The sample of students we worked with is too small for firm conclusions to be drawn in this regard. Nonetheless, the results of this project, taken in conjunction with what was found in the literature review, would certainly justify conducting a large scale study to evaluate the merits of the two very different approaches.

Teacher guided instruction can be cost effective. Our estimation is that a skilled teacher could work with as many as eight to twelve students and achieve results comparable to what was observed in this program. That is still a much smaller student-teacher ratio than what school systems can usually afford to support, and for that reason special funding for such programs will be necessary. In the long run, it is always cost effective to support a program that makes a difference, although it may be more expensive, than it is to fund cheaper programs that do not work.

Recruitment. For the poorest readers, participation in a reading program should be mandatory. This recommendation is made with some reservations, however. The gains obtained with the volunteers may not hold up with nonvolunteers. That will be tested this fall when the program is extended and attendance is required in order to stay enrolled in Entitlement. Requiring participants seems to be the only way to insure that more of those who urgently

need the instruction receive it.

Others who are setting up programs should consider holding the classes in storefront-type academies within the students' communities. That would reduce travel problems and perhaps also make the setting more inviting and congenial. It is not feasible within our budget to take that approach, but there is evidence that community based centers can be very effective. We would not recommend holding the classes in the students' regular high schools, although we had intended to do that initially for the Hawthorne students. However, those students claimed to prefer coming to the University, and we thought it useful to establish an identity for the program which would clearly distinguish it from what is offered in the regular school.

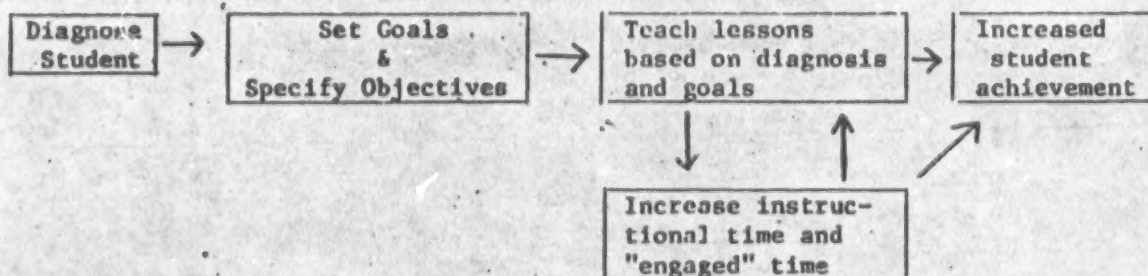
V REVIEW OF LITERATURE

Rationale for Our Program

Prior to designing the Enrichment Reading Program, a review of the literature on compensatory reading programs was conducted. The instructional strategies and planning that the literature revealed to be effective is restricted to compensatory education programs and is not necessarily generalizable to other populations.

The paradigm for effective instruction, presented in Figure 1, is based on the premise that instruction should be matched to the student's current level of functioning. If the instruction is too advanced the student will not be able to comprehend enough for growth to occur. If the instruction is too easy, the student will be bored and not learn anything new. Thus, it is necessary that the teacher have some diagnostic information about each student prior to planning.

Figure 1
Paradigm for Effective Instruction



Based on the results of the diagnosis, the teacher is then able to develop appropriate goals and specify those objectives necessary for reaching those goals. A student's program should be planned so that classtime is used to maximum efficiency. Instruction needs to be related directly to the goals and objectives developed for the student. Young adults reading at a very low level have not reached an adequate level of literacy within the time normally allowed for instruction, therefore it is necessary to provide additional instructional time on the component skills that were not mastered. Instructional time means "actually spending time on the act of learning" (Carroll, 1963, p. 725) and not just increase the time allotted to instruction. The student must be oriented to the instructional task and be actively engaged in learning.

When the characteristics of the paradigm are followed, the literacy level of the client should improve.

Grouping

For many years, it has been argued that a smaller teacher-pupil ratio is related to increased student achievement. Kiesling (1971) examined the relationship between large and small group instruction and reading achievement. He interviewed teachers of 2400 students from four school districts about instructional time on the whole and about the type of grouping used in reading instruction.

Using the California Achievement Test and a criterion-referenced test on elementary school children in March-June, 1975, Kiesling performed a multiple regression analysis of the results of the scores on reading achievement. He reported that, most importantly, classroom teacher small and large grouping for instruction is related to performance in reading between 30 and 50 percent of the time depending on the statistical level of significance used. The

highest percentages are found for students who were about one grade level behind in achievement in reading. Also, this study showed the value of instructional time which is given to each student (i.e., counting the amount of time and evaluating the qualifications of the person who gives it). The value of instructional time is lowest for the most advanced students and rises dramatically with less advanced students. While this study is complicated by the measurement of the amount of instructional time given to a student, smaller teacher-pupil ratios allow for more instructional time per pupil. Smaller class size does result in increased gains in reading achievement.

In a study of whole group instruction as compared with individualized instruction in reading at the secondary level, Stallings (1978) reported that students improve more in reading when the teacher focuses attention more frequently upon a large group or total class, as opposed to the teacher working with one student at a time. Stallings offered an interesting commentary on the relative value of working with an individual student when she stated, "This does not mean that working with individuals is poor practice. It does suggest that when the teacher spends a large amount of class time with one student, the other students may not receive the instruction or feedback they need. Thus, it is important to organize the classroom to provide instruction to the maximum number of students possible for the longest period of time" (1978, p. 8).

It seems clear from the studies by Stallings and Kiesling that a critical variable in the effectiveness of class size, as related to achievement, is the amount of time a teacher spends with each student in instruction. Individualized instruction, while effective for that single student, does not allow for large amounts of instructional time for the remainder of the class. Class size and grouping for instruction therefore must strike a balance between

individual attention and moderate attention to the entire class. Some studies have reported that small groups of from three to six students appear to be most effective. The source of their conclusions was not indicated.

Level of Questioning and Direct Teaching

Two characteristics of effective compensatory education classes relate directly to teacher performance. The first is the level of questions asked by the teacher to the student. Using Bloom's taxonomy, questions can be classified at a low cognitive level, such as knowledge and information questions, or at a high cognitive level, such as evaluation or synthesis.

In an extensive review of the available literature, Medley (1977) summarized research done in classes of grade three or below in which most of the pupils came from homes of low socioeconomic status. Among the variables examined in this review, Medley reported that effective teachers of low socioeconomic students asked more questions classifiable at the lower levels of Bloom's taxonomy than did ineffective teachers. Effective teachers were less likely to be seen amplifying, discussing, or using student answers. They either acknowledged the student's answer or went on to something else. Pupil-initiated questions and comments tended to be less in classes taught by effective teachers. In other words, the effective teacher kept interaction at a low level of complexity and pupil initiative. The teacher was not likely to encourage pupils to analyze, synthesize, or evaluate, but would have students answer narrow questions asked by the teacher.

According to Medley, effective teachers in high socioeconomic classes were most likely to use one of the two following question patterns: 1) to identify the pupil who was to answer the question before asking it, or 2) to ask a question and then call on a pupil who indicated a desire to answer the

question. In these classes the teacher was more likely to discuss the pupil's answer, unless the answer was incorrect. When the answer was incorrect, the effective teacher was likely to criticize the pupil's answer or to answer the question personally. By contrast, the effective teacher in low socioeconomic classes tended to ask the question first and then choose a respondent who probably had not indicated a desire to answer the question. These teachers were less likely to discuss the pupil's answer and, if the answer were incorrect, the teacher was less likely to criticize the answer or to answer the question personally.

The questioning strategy that was most likely to be successful for compensatory reading programs in the primary grades was to ask simple questions since they are more likely to elicit responses that are correct and seldom merit further discussions. To hold the student's attention, the teacher was more likely to ask the question first and then indicate who was to answer it. Criticism of the student's response was rare, even when incorrect. If the student did not answer the question, the teacher was more likely to lead the student to answer the question. Pupil-initiated questions tended to occur less frequently in low socioeconomic classes taught by effective teachers.

In addition to the above, Stallings (1978) reported a positive correlation ($r = .41$) between reading achievement and the teacher questions. Teachers who guided students who said they did not know the answer to a question by asking additional questions and students with higher reading achievement scores. Medley (1977) reported that the effective teacher asked easy questions, and these questions tended to be at a lower cognitive level. For these teachers, the teacher presented most of the content, asked low level questions, and pupil questions were low in frequency. The suggestions regarding questioning are normally used when one is wanting the clients to

memorize information or answer a factual question. Memorizing is normally done in a drill session and students have no freedom of thought to explore alternative responses. When teachers ask complex questions, students are allowed more opportunities to explore alternative ideas. However, if the objective is to learn five new words, then a drill session in which pupils are moved rapidly from question to question, then little or no freedom to explore is certainly appropriate as an effective learning experience.

A second characteristic of effective compensatory education classes was the variable of "direct" teaching. This term includes the following. First, the amount of time a teacher is directly involved with actively teaching the students. Second, the amount of time the teacher is actively monitoring the learning of students as compared with the amount of time the students work independently at their seats. Third, the amount of time the students attend school also is important, in that being in school allows the teacher to have a direct effect on their learning.

A study by Spartz et al. (1977) examined the reasons why first grade pupils entering school were above national norms and by the fourth grade were below national norms in reading and mathematics. By the eighth grade, these students were substantially below national norms. A task force was implemented to analyze the functions of six schools where pupil achievement was below expectancy in reading and mathematics. In addition to an examination of the management and organizational patterns of the schools, the task force analyzed the methods and techniques of instruction, as well as the conditions for learning.

The findings indicate many differences between schools achieving above expectancy (SAE) and those achieving below expectancy (SBE). In the above expectancy schools, supplementary materials were task-oriented and lesson-related,

while in the below expectancy schools these materials were used for occupying time. Basal readers were often the only source, in the reading programs, for the below expectancy schools, while in the above expectancy schools, basal readers were only one component of the instructional program. On the average, in the above expectancy schools, teachers reported spending 80 percent of their time in instruction and 20 percent in classroom management. These teachers demonstrated more understanding of the structure and substance of the content being taught than did teachers in the below expectancy classes. Across grade levels two, three and four, the number of specific objectives increased with grade level in the above expectancy classes, but not in the below expectancy classes. Teachers in the above expectancy classes also were better able to judge more accurately the time needed to teach a lesson.

Time in formal instruction was found to be a significant variable affecting achievement. Wiley and Harnischfeger (1974; cited in Guthrie, et al., 1976) found that the actual amount of schooling sixth graders received in an academic year may be as much as 24 percent greater for some students than for others. This difference in quantity of schooling produced associated gains in reading comprehension that was two-thirds greater for those students who attended school for a longer period of the day.

In compensatory programs for second grade children, children who received maximum time in reading program instruction made larger gains on the test than those who received minimal time. In grade six, instructional time was found to have a significant effect on reading comprehension using the Sequential Test of Educational Progress (STEP). In comparing the interaction between instructional time and instructional emphasis for second grade children, for programs with high skills emphasis, amount of instructional time did not

influence gains in comprehension. On the other hand, for classes with low skill emphasis, amount of instructional time had a significant impact. The condition of low skills emphasis combined with maximum instructional time produced greater gains in comprehension than did any other combination of these variables for second grade compensatory classes.

Instructional time appears from this study to have a significant impact on achievement in reading, particularly for low socioeconomic children who are relatively young and lower in reading achievement. While instructional emphasis on skills was also an important variable, it appeared to have less impact on achievement than instructional time.

Medley's study (1977) of grades three and below for pupils of low socioeconomic status indicated that effective teachers in these grades devoted more time to task-related or "academic" activities. The class was more structured, and there was less time when the children were unoccupied. More effective teachers also spent time in class discussing matters unrelated to lesson content. While effective teachers of low socioeconomic students had students spend less time on seatwork than less effective teachers, the effective teacher spent more time checking individual pupils at their seats and was more diligent when doing so. When the effective teacher talked to an individual pupil, the teacher tended to talk longer and pay more attention to the pupil than did the less effective teacher. When the effective teacher allowed pupils to work independently, the teacher actively supervised them giving careful attention to those individual children who needed it. The less effective teacher assigned seatwork and left the students pretty much to themselves. Any student who needed help had to seek it from the teacher. Rim and Collier (1978) supported Medley's findings by demonstrating that child self-instruction was negatively related with residualized Metropolitan Test scores.

Harris and Serwer (1966) analyzed the results of the CRAFT Project, which was designed to compare programs in reading for elementary school children using a Skills-Centered approach and a Language-Experience approach. Each of these programs had two components. The Skills-Centered approach used a basal reading program, as well as a basal reading program plus an intensive phonics program. The Language-Experience approach used as regular language-experience procedure with a normal amount of audio-visual materials, as well as a language-experience procedure with extra audio-visual materials. An analysis of data collected on disadvantaged students from 12 schools in New York indicated that instructional time was an important variable, and possibly even more important than instructional method. Although the total instruction a day was the same for the two approaches (170 minutes/day), the time spent on reading differed greatly. The Skills-Centered teachers spent 55 percent of their time in reading and 45 percent of their time on supportive activities. Language-Experience teachers spent 39 percent of their time in reading 61 percent on supportive activities. Achievement was higher for the Skills-Centered group.

There have been two studies that have been focused on the amount of time a child attends school and achievement. Additional analysis of data from the CRAFT Project indicated that students who attended school on full sessions showed favorable achievement results when compared with children on split sessions. Guthrie, et al. (1976) also reported that attendance at elementary school was important for achievement, particularly for the low socioeconomic child. Guthrie's analysis of Jencks (1973) study of secondary school children in Holland indicated that their ability scores dropped by one-half a standard deviation because the elementary schools in Holland were closed during World War II. Prince Edward County Schools closed rather than integrate, and when

the schools reopened, black children who had not attended school for several years scored significantly lower on achievement tests when compared with other black children of the same age. Test scores of children in New York City dropped commensurate with the amount of time out of school during the 1968 teacher's strike.

Stallings (1978) reported an unanticipated relationship between leisure reading and absence rate. Students came to class less frequently in classrooms where they more frequently engaged in leisure reading. Apparently, a high level of leisure reading can reflect lack of teacher preparation and inefficient classroom structure. Stallings also pointed out that leisure reading may be related differentially to classroom absences within different subgroups of the classroom, depending upon the reading ability of the students. Less able readers were absent more often in classrooms with high amounts of leisure reading.

Most of the studies examined so far are from the lower grades. However, Stalling's (1978) study examined observational data in junior and senior high schools in classes where reading was being taught. Basically, she tested to see whether the same kinds of variables which related to increased achievement with low SES students in the lower grades in school would also be effective for junior and senior high school students. Stalling's findings were that the direct instruction model was effective in producing gain for those students.

Supplementary Materials

The research available on the effect of the use of supplementary materials on achievement is limited. The CRAFT Project employed supplementary materials such as audio-visual material or supplementary reading material. Rosenshine (1976) pointed out that both the underuse and overuse of supplementary materials

is negatively related to achievement. The moderate use of a variety of materials or the relatively frequent use of a few materials appears to be optimal for achievement. The closer the supplementary materials are to the basal or primary book used in the class, the more effective they will be in increasing achievement.

Classroom Procedures

Beginning with an appropriate diagnosis of the strengths and weaknesses of the students in a compensatory education program and moving to the implementation of the objectives and goals of the program in the classroom, there are a number of classroom characteristics that have been examined as they relate to academic achievement.

The first is the value of an appropriate diagnosis. Powell (1977) points out that, once the educational deficits are known, it is important to discuss with the students what their needs are in order for them to see the relevance of a particular program. Fisher, et al. (1978) agree with Powell's statement and argue that, once teachers have the diagnostic information, it is important that a structured program be at the student's appropriate level and based on each student's educational deficits. Guthrie, et al. (1976) points out that the feedback received from the students can serve as an ongoing diagnostic aid to the teacher for further planning. Stallings (1978) suggests that many compensatory education classrooms are more homogeneous than heterogeneous in composition and that common planning and diagnosis across students is more realistic. Fisher (1978), in his study entitled Beginning Teacher Evaluation Study, analyzes conditions that foster learning in the classroom. One of his findings is that teacher awareness of the strengths and weaknesses of the student is associated positively with learning. Thus, it would seem that an

appropriate diagnosis is an effective way to become aware of student strengths and weaknesses.

A good deal of research has been done on the goals set by the teacher in the compensatory education classroom. Fisher (1978) found that there is a positive relationship between teacher emphasis on academic goals and academic learning. He stated that teachers who are oriented toward affect to the exclusion of academic instruction have a negative relationship with academic learning in the students. The objectives for compensatory education programs need to be clearly stated, and McDill, et al. (1969) found that one of the major tasks of the compensatory education teacher is to plan goals carefully, and then develop specific learning objectives to achieve these goals. Spartz, et al. (1977), in comparing successful and unsuccessful schools, found that successful reading and math programs in Delaware had an increased number of specific objectives between grades two and three and between grades three and four. This suggests that high achieving schools have better sequenced programs of instruction.

Hawkrige, et al. (1968) examined secondary programs which appeared to be successful. He reported that successful programs had clearly stated objectives, which were often based on individual diagnosis, and tightly controlled teaching was linked to these objectives. His analysis consistently showed that the addition of personnel, services, or equipment was of no avail, unless each addition of support help was carefully integrated into a well-planned program and was made relevant to the program objectives.

The Outlier Study completed by the New York Education Department (1974) found that teachers in the high outlier schools made less overt effort to maintain class control and had less rigid student behavior, but were more efficient in maintaining the level of control they appeared to want than were

teachers in the low outlier schools. Teachers in the high outlier schools were rated as warmer, more responsive, and placed more emphasis on cognitive development. These teachers also had greater achievement expectations of their students. Stallings (1978) found that teachers who were warm and supportive experienced fewer student absences from class. Also, students were absent less in those classes where the teacher spent time managing, holding discussions, and making the rules of the classroom clear.

Both Medley (1977) and Rosenshine (1976) emphasized that the stronger the academic emphasis in the classroom, the stronger the academic results. Rosenshine found that greater amounts of instructional time in reading were beneficial for low socioeconomic children. Medley's review concluded that, in grades two and below, the more time devoted to task-related or academic activities, the greater the academic achievement. In these classrooms, the class was more structured, and there was less time in which the student was unoccupied. Effective teachers also spent less class time discussing matters unrelated to lesson content.

An additional finding of the Outlier Study done by the New York Department of Education (1974) was that in grades one to three, teachers in the high outlier schools gave more positive and less negative reinforcement than did teachers in the low outlier schools. In grades four to six, teachers in the low outlier schools gave more positive reinforcement, but tended to use greater amounts of negative reinforcement than did teachers in the high outlier schools. Stallings (1978) also found that corrective feedback has a negative relationship to reading achievement, while probing by the teacher appeared to have a positive relationship to reading achievement. She concluded that positive feedback, probes, and guides were more efficient than negative feedback.

One of the characteristics of effective compensatory education programs identified by Fisher, et al. (1978) is the rate of error as it relates to academic achievement. He states that students who perform below grade level achieve better when there are low error rates in their work. This suggests that it is crucial for a student to be placed with material at the student's instructional level or even at their independent level, and that work done should be easy enough that few errors occur.

Academic Learning Time

Increased instructional time is a characteristic affecting achievement that appears consistently in the literature. Instructional time means the "time during which a student is oriented to the learning task and actively engaged in learning" (Carroll, 1963, p. 725). It is the time when a student is paying attention and attempting to learn.

A landmark study in this area was reported by Fisher, et al. (1978) in the Beginning Teacher Evaluation Study where the major variable studied was academic learning time (ALT). Fisher hypothesized that when academic learning time increased there would be gains in achievement. This study was done with second and fifth grade teachers and pupils, where six boys and six girls were observed in the classroom one day each week. A total sample of 129 children in second grade and 122 children in sixth grade was used. All of the students were mainstream students in regular classes and only socioeconomic data on parents' occupation was collected. The BTES reading and mathematics test battery was administered in four segments of 45 minutes of each of two days. Of interest to this section were two of the three components of academic learning that were analyzed. The variable of allocated time, that time designated by the teacher for the learning task, and the variable of engaged

time, the time that the student was attending to the task, were analyzed.

The results of the analysis indicated that students who accumulate more academic learning time in a particular subject area will attain higher achievement in that area. Student engaged time was associated positively with learning of both reading and mathematics. That is, both allocated time and engaged time were associated positively with gains in achievement, and higher levels of engaged time produced greater gains in achievement.

The findings from the BTES study need to be tempered with additional findings that suggest that there may be a maximum amount of time during which the student is engaged actively in instruction and gain in achievement. Rim and Collier (1978) reported that the amount of time spent in mathematics-type activities is related positively to achievement gains until a peak is reached when about 30 percent of the school day is devoted to such activities. After that, students' mathematics achievement decreases as the amount of time spent on mathematics activities increases. The optimum amount of time devoted to academic skill development appears to be between 18 and 30 percent of the school day. Beyond that, achievement declines.

Rosenshine (1976) studied direct instructional time as it is related to achievement. He reported that reading achievement was maximal for classes having moderate amounts of child attention; and extremes at both ends of attentiveness were associated with decreasing amounts of student achievement. It appears that too little or too much attentiveness, especially if the latter is nonacademically oriented, is nonfacilitative.

Summary and Implications

In the first part of this section, a number of studies were reviewed under single headings such as class size or teacher preparation. While this

was done to organize the available literature into useful categories, it should be clear that there is an interaction between many of the characteristics reviewed. Emphasis on any one characteristic will have an effect on other characteristics.

Figure 1 presented earlier provides a paradigm for summarizing the major characteristics identified for effective instruction. The following are the major areas that have been studied as they relate to effective instructional procedures in compensatory education classes or programs. Effective instruction begins with an appropriate diagnosis of the strengths and weaknesses of the individual student. Based on this diagnosis, the teacher who develops clear goals which are clearly stated to the student is more likely to be effective. In the classroom, the use of direct teaching of cognitive and academic subject matter with reasonably high expectations of student achievement produces greater gains in achievement. Students who are actively engaged in the learning task and who receive positive feedback and clear indications of their progress are more likely to show gains in achievement. Finally, smaller class size and small group instruction have been associated with achievement gains.

From the results of the literature reviewed, the following appears to be an accurate description of what an effective compensatory classroom would look like. The classroom has no more than 20 students, and probably fewer. The teacher is trained and experienced and has participated in both inservice and preservice training and/or workshops which have focused on the methods, procedures, and philosophy of the school where the classroom is located. The teacher has clear goals and expectations for the students and these goals have been developed as a result of a careful diagnosis of the strengths and weaknesses of the students. The classroom atmosphere is warm and supportive with positive feedback but with high achievement expectations for the students.

The teacher is actively engaged in the process of learning in the classroom and allows the students relatively little time in individual seatwork exercises. When seatwork is used, the teacher is an active monitor of the students' activity and interacts with the students. The students are task-oriented and are allowed little time in which they are unoccupied with learning. The students are aware of the goals of the teacher and have a clear idea of what is expected of them. The teacher asks simple and direct questions, and relatively few pupil-initiated questions occur. The teacher selects the student who is to answer the question and if the student's answer is incorrect, the teacher attempts to lead the student to the correct answer. Student answers to questions are usually not discussed and the teacher moves on to the next task.

The amount of time spent on learning is of greater importance than the particular method employed. The teacher is aware of the amount of time it takes to teach a lesson. The amount of time on instruction of a single subject is high, but does not exceed more than 30 percent of the class day. Lessons are planned so that the error rate of the students is relatively low and experiences of success are high. At the same time, the students are expected to be actively engaged in academic learning and to spend little time in unrelated activities such as workbooks or talking amongst themselves.

Whenever possible, additional personnel are used in the classroom. The trained reading specialist serves both as a teacher of the students and as a resource for the teacher. Supplementary materials are available in reasonable quantities, but the decision to use these materials is determined by their direct relevance to the lesson being taught. Supplementary materials are not used to fill time that could be used in instruction geared towards skill development. When the teacher breaks the classroom into groups, the size of

the groups range from three to six, and the teacher works with an individual pupil only occasionally.

The characteristics just described are not atypical of many classrooms. It is important to indicate that it is the organized combination of many of these characteristics as a total unit that contributes to increased student achievement. While these characteristics may not be as important for classes with high achieving students, for students in the compensatory education class who comes from a low socioeconomic background, these characteristics, in combination, have been demonstrated to be associated with significant gains in student achievement.

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APPENDIX A
Pre- and Post- Test Scores For
Clients Enrolled for Thirteen or More
Instructional Hours

Student	PPVT	Pretest WRAT	Posttest WRAT	Pretest GAPADOL	Posttest GAPADOL
1	74	7.9	9.6	5.6	8.4
2	80	8.9	10.5	9.8	9.5
3	75	7.3	8.5	9.5	11.8
4	74	6.5	7.5	6.6	8.2
5	75	9.1	12.2	7.9	8.0
6	60	3.2	6.2	3.7	3.7
7	91	8.5	10.2	5.7	11.9
8	98	6.3	7.7	6.9	5.7
9	77	6.0	9.1	5.0	7.1
10	66	6.3	7.1	7.0	10.1
11	92	8.5	9.3	3.0	5.0
12	66	5.5	6.5	7.3	9.6
13	75	6.9	9.9	7.3	6.9
14	87	4.2	6.0	3.7	4.0
15	94	3.1	4.8	3.4	3.2
16	104	5.8	6.2	6.7	8.2

APPENDIX B
FREQUENCY OF RATINGS OBTAINED ON WORK EVALUATION
CATEGORIES BY EXPERIMENTAL GROUP

	Excellent	Very Good	Good	Fair	Needs Improvement
1. Attendance	<u>6</u>	<u>2</u>	<u>2</u>	<u>0</u>	<u>0</u>
2. Punctuality	<u>5</u>	<u>1</u>	<u>4</u>	<u>0</u>	<u>0</u>
3. Dependability	<u>5</u>	<u>3</u>	<u>2</u>	<u>0</u>	<u>0</u>
4. Appearance	<u>9</u>	<u>0</u>	<u>1</u>	<u>0</u>	<u>0</u>
5. Attitude	<u>7</u>	<u>1</u>	<u>2</u>	<u>0</u>	<u>0</u>
6. Cooperation	<u>7</u>	<u>2</u>	<u>1</u>	<u>0</u>	<u>0</u>
7. Getting along with co-workers	<u>7</u>	<u>2</u>	<u>1</u>	<u>0</u>	<u>0</u>
8. Ability to follow directions	<u>7</u>	<u>1</u>	<u>2</u>	<u>0</u>	<u>0</u>
9. Initiative	<u>2</u>	<u>5</u>	<u>3</u>	<u>0</u>	<u>0</u>
10. Acceptance of responsibility	<u>3</u>	<u>5</u>	<u>2</u>	<u>0</u>	<u>0</u>
11. Willingness to work	<u>7</u>	<u>1</u>	<u>2</u>	<u>0</u>	<u>0</u>
12. Reception to constructive criticism	<u>4</u>	<u>4</u>	<u>2</u>	<u>0</u>	<u>0</u>
13. Interest in work	<u>3</u>	<u>5</u>	<u>1</u>	<u>1</u>	<u>0</u>
14. Quantity of work	<u>3</u>	<u>4</u>	<u>3</u>	<u>0</u>	<u>0</u>
15. Improvement during training	<u>4</u>	<u>4</u>	<u>2</u>	<u>0</u>	<u>0</u>

FREQUENCY OF RATINGS OBTAINED ON WORK EVALUATION
CATEGORIES BY MATCHED CONTROL GROUP

	<u>Excellent</u>	<u>Very Good</u>	<u>Good</u>	<u>Fair</u>	<u>Needs Improvement</u>
1. Attendance	<u>5</u>	<u>0</u>	<u>2</u>	<u>3</u>	<u>0</u>
2. Punctuality	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>	<u>0</u>
3. Dependability	<u>4</u>	<u>2</u>	<u>1</u>	<u>3</u>	<u>0</u>
4. Appearance	<u>3</u>	<u>4</u>	<u>1</u>	<u>2</u>	<u>0</u>
5. Attitude	<u>4</u>	<u>4</u>	<u>0</u>	<u>1</u>	<u>1</u>
6. Cooperation	<u>4</u>	<u>4</u>	<u>0</u>	<u>2</u>	<u>0</u>
7. Getting along with co-workers	<u>2</u>	<u>5</u>	<u>2</u>	<u>1</u>	<u>0</u>
8. Ability to follow directions	<u>3</u>	<u>3</u>	<u>2</u>	<u>2</u>	<u>0</u>
9. Initiative	<u>3</u>	<u>2</u>	<u>2</u>	<u>3</u>	<u>0</u>
10. Acceptance of responsibility	<u>3</u>	<u>2</u>	<u>2</u>	<u>3</u>	<u>0</u>
11. Willingness to work	<u>3</u>	<u>3</u>	<u>1</u>	<u>3</u>	<u>0</u>
12. Reception to constructive criticism	<u>4</u>	<u>2</u>	<u>1</u>	<u>3</u>	<u>0</u>
13. Interest in work	<u>2</u>	<u>3</u>	<u>2</u>	<u>3</u>	<u>0</u>
14. Quantity of work	<u>3</u>	<u>1</u>	<u>3</u>	<u>3</u>	<u>0</u>
15. Improvement during training	<u>3</u>	<u>2</u>	<u>2</u>	<u>3</u>	<u>0</u>